

REMARKS/ARGUMENTS

Claims 1, 3-9, and 11-22 were previously pending in the application. Claims 8 and 16 are canceled; claims 4-6, 12, 14, and 17 are amended; and new claims 23-25 are added herein. Assuming the entry of this amendment, claims 1, 3-7, 9, 11-15, and 17-25 are now pending in the application. The Applicant hereby requests further examination and reconsideration of the application in view of the foregoing amendments and these remarks.

On page 2 of the office action, the Examiner stated that claims 1, 3, 9, 11, and 21-22 are allowable. On page 3, the Examiner rejected claims 4, 6-7, 12, 14-15, and 17-19 under 35 U.S.C. 103(a) as being unpatentable over Persson in view of Toskala. On page 8, the Examiner rejected claims 5, 8, 13, 16, and 20 under 35 U.S.C. 103(a) as being unpatentable over Persson in view of Toskala and Wallentin. For the following reasons, the Applicant submits that all of the now-pending claims are allowable over the cited references.

Claim 20

Claim 20 depends from claim 3, which the Examiner stated was allowable. As such, the Applicant submits that claim 20 is also allowable and that the rejection of claim 20 was improper.

Claims 4 and 12

Claims 4 and 12 have been amended to clarify that the downlink reference power is determined from the received user channel transmit power information and from the base station identifier and the signal-to-noise ratio value in the received information from the user equipment.

In rejecting previously pending claims 4 and 12, the Examiner cited a combination of teachings in Persson and Toskala. For the following reasons, the Applicant submits that the Examiner mischaracterized the teachings of the prior art in rejecting these claims.

Persson teaches two different downlink transmit power control procedures: one procedure associated with Figs. 4A-C and a second procedure associated with Figs. 5A-C. During the first procedure, the base stations transmit their current transmit power levels to the radio network controller (RNC), and the RNC uses only those transmit power to calculate a downlink power reference value, which is then transmitted to the base stations. See column 7, lines 12-18.

Persson's transmit power levels transmitted from the base stations to the RNC are analogous to the "user channel transmit power information" recited in claims 4 and 12, and Persson's downlink power reference value transmitted from the RNC to the base stations is analogous to (but different from) the "determined downlink reference power" recited in claims 4 and 12.

According to claims 4 and 12, the downlink reference power is determined from the received user channel transmit power information and from the base station identifier and the signal-to-noise ratio value in the received information from the user equipment. In Persson, the downlink power reference value is determined using only the transmit power levels. There is no teaching or even suggestion in Persson for using anything in addition to the transmit power levels to determine the downlink power reference value.

Persson does teach using signal quality measurements (e.g., signal-to-interference ratios) measured at the user equipment and transmitted to the base stations, but those signal quality

measurements are not used to generate the downlink power reference value. Rather, those signal quality measurements are used in Persson's second procedure associated with Figs. 5A-C, which determines a different power offset from the downlink reference power level for one or more base stations. See column 8, lines 35-45. Persson explicitly teaches, on column 8, lines 16-20, that these power offsets are relative to the downlink reference power level generated using the first procedure, which downlink reference power level is, as described above, based only on the transmit power levels and nothing else.

In rejecting claims 4 and 12, the Examiner stated that "Persson teaches determining a downlink reference power from the received user channel transmit power information and the received information from the user equipment," citing column 8, lines 39-49, and column 10, lines 28-31. Significantly, the teachings at both column 8, line 39-49, and column 10, lines 28-31, relate to Persson's second procedure for calculating the power offsets, not Persson's first procedure for calculating the downlink reference power level. In fact, column 10, lines 28-31, are part of Persson's claim 1, in which the first three steps in the method claim relate to Persson's first procedure and the last two steps relate to Persson's second procedure. Significantly, the first step recites "determining a reference power based on detected transmit power levels of the first and second base stations." Although the claim language open-ended, nevertheless, the recitation is consistent with the rest of the teachings in Persson in that the downlink reference power level is based on the transmit power levels and nothing else.

Claims 4 and 12 have been amended to identify explicitly that the determination of the downlink reference power takes into account the base station identifier and the signal-to-noise ratio value received from the user equipment, and not just some other information that might also be received from the user equipment.

For all these reasons, the Applicant submits that currently amended claims 4 and 12 are allowable over the cited references. Since claims 5, 13, and 22-24 depend variously from claims 4 and 12, it is further submitted that those claims are also allowable over the cited references.

New Claims 23-24

According to new claims 23-24, which depend from claims 4 and 12, respectively, the downlink reference power is determined by summing (i) the user channel transmit power for the identified base station and (ii) a value based on the signal-to-noise value. Support for new claims 23-24 is found on page 7, lines 1-10, of the specification. The Applicant submits that none of the cited references teaches such a technique for determining a downlink reference power. As such, the Applicant submits that this provides additional reasons for the allowability of claim 23-24 over the cited references.

Claims 5-6, 13-14, and 17

According to claim 5, the signal-to-noise ratio value transmitted from the user equipment represents an excess signal-to-noise ratio value determined as the amount by which the signal-to-noise ratio value of the signal received from the identified base station exceeds a target signal-to-noise ratio value. Claim 13 recites similar features; claims 6 and 14 have been amended to recite similar features that were previously recited in (now canceled) claims 8 and 16; and claim 17 has been amended to recite similar features.

In rejecting previously pending claims 5, 8, 13, and 16, the Examiner admitted that Persson and Toskala do not teach that the signal-to-noise ratio value represents an excess signal-to-noise ratio value, as that term is defined in the claims. Instead, the Examiner cited Wallentin as teaching the features missing from Persson and Toskala.

In particular, the Examiner stated that "Wallentin teaches a signal-to-noise ratio value determined as the amount by which the signal-to-noise ratio value differs from a target signal-to-noise value," citing column 5, lines 26-30. For the following reasons, the Applicant submits that the Examiner mischaracterized the teachings in Wallentin and improperly applied those teachings to reject previously pending claims 5, 8, 13, and 16.

In column 5, lines 26-30, Wallentin teaches that a base station compares a signal to interference/noise ratio (SINR) to a target signal to interference/noise ratio (TSINR) to determine whether to transmit an appropriate power change command to a mobile station.

First of all, Wallentin does not teach the determination of an excess signal-to-noise ratio value, where the excess signal-to-noise ratio is "the amount by which the signal-to-noise ratio value of the signal received from the identified base station exceeds a target signal-to-noise ratio value." The only thing that Wallentin does is compare the SINR to the TSINR to determine whether the SINR is bigger or smaller than the TSINR in order to determine whether to increase or decrease the mobile station's transmit power level. See column 5, line 33.

Secondly, the processing described in Wallentin is implemented at a base station, not at a mobile station. In Wallentin, the SINR corresponds to the signal transmitted from the mobile station and received at the base station. In the rejected claims, the signal-to-noise ratio value used to determine the excess signal-to-noise ratio value corresponds to the signal transmitted from a base station to the user equipment (analogous to Wallentin's a mobile station).

Furthermore, in Wallentin, there is no transmission of any signal-to-noise ratio value. In the rejected claims, the excess signal-to-noise ratio value is transmitted from the user equipment and received at the wireless equipment.

Lastly, there is no suggestion in Wallentin or any other cited reference for using an excess signal-to-noise ratio value to determine a downlink reference power. Even if the cited teachings in Wallentin did relate to an excess signal-to-noise ratio value (which the Applicant does not admit), those teachings in Wallentin have nothing to do with determining a downlink reference power and there is no motivation in the prior art for using such a teaching to modify the procedures taught in Persson for determining Persson's downlink reference power level.

In view of the foregoing, the Applicant submits that the Examiner mischaracterized the teachings in Wallentin and improperly combined those teachings with the teachings in other cited references to reject previously pending claims 5, 8, 13, and 16. As such, the Applicant submits that pending claims 5-6, 13-14, and 17 are allowable over the cited references. Since claims 7, 15, and 18-19 depend variously from claims 6, 14, and 17, it is further submitted that those claims are also allowable over the cited references.

New Claim 25

New claim 25 is equivalent to previously pending claim 22 rewritten in independent form. Since the Examiner stated that previously pending claim 22 would be allowable if rewritten in independent form, the Applicant submits that new claim 25 is allowable.

In view of the foregoing, the Applicant submits therefore that the rejections of claims under Section 103(a) have been overcome.

In view of the above amendments and remarks, the Applicant believes that the now-pending claims are in condition for allowance. Therefore, the Applicant believes that the entire application is now in condition for allowance, and early and favorable action is respectfully solicited.

Respectfully submitted,

Date: 8/18/05
Customer No. 46850
Mendelsohn & Associates, P.C.
1500 John F. Kennedy Blvd., Suite 405
Philadelphia, Pennsylvania 19102

Steve Mendelsohn
Steve Mendelsohn
Registration No. 35,951
Attorney for Applicant
(215) 557-6657 (phone)
(215) 557-8477 (fax)